



MAIL STOP APPEAL
BRIEF - PATENTS

UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Applicant: B. Dharmarajan

Attorney Docket No. MSFT115430

Application No: 09/650,104

Art Unit: 2136 / Confirmation No.: 9023

Filed: August 29, 2000

Examiner: B.S. Hoffman

Title: METHOD AND APPARATUS FOR ENCODING
AND STORING SESSION DATA

APPELLANT'S APPEAL BRIEF

Seattle, Washington

August 18, 2005

TO THE COMMISSIONER FOR PATENTS:

This brief is in support of a Notice of Appeal for the above-identified application, filed April 18, 2005, to the Board of Patent Appeals and Interferences, appealing the Examiner's decision dated November 10, 2004, finally rejecting Claims 1-21.

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TABLE OF CONTENTS

	<u>Page</u>
I. REAL PARTY IN INTEREST	1
II. RELATED APPEALS AND INTERFERENCES	2
III. STATUS OF CLAIMS	3
IV. STATUS OF AMENDMENTS	4
V. SUMMARY OF CLAIMED SUBJECT MATTER	5
A. Summary of Exemplary Subject Matter.....	5
B. Support for Claimed Subject Matter in the Specification.....	7
1. Claims 1-15.....	7
2. Claims 16-21.....	7
VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL.....	9
VII. ARGUMENT	10
A. Summary of References.....	10
Spies.....	10
Shrader	11
Quimby.....	11
Hardy.....	12
Becker	13
B. Ground 1: Claims 16-17 Rejected Under 35 U.S.C. § 102(b)	13
1. Rejection of Independent Claim 16	14
2. Rejection of Dependent Claim 17.....	15
C. Ground 2: Claims 1, 2-7 and 12-15 Rejected Under 35 U.S.C. § 103(a)	16
1. Rejection of Independent Claim 1	16

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D.	Ground 3: Claims 8-11 Rejected Under 35 U.S.C. § 103(a)	19
	Conclusion	20
VIII.	CLAIMS APPENDIX.....	21
IX.	EVIDENCE APPENDIX	25
X.	RELATED PROCEEDINGS APPENDIX	26

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I. REAL PARTY IN INTEREST

The subject application is owned by Microsoft Corporation of Redmond, Washington.

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II. RELATED APPEALS AND INTERFERENCES

Upon information and belief, Appellant does not have any knowledge of related appeals or interferences that may directly affect or have a bearing on the decision of the Board of Appeals and Interferences ("the Board") in the pending appeal.

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III. STATUS OF CLAIMS

On August 29, 2000, Appellant filed the pending patent application including Claims 1-21. On March 23, 2004, the Examiner issued a first Office Action rejecting Claims 1-21. On June 15, 2004, the Appellant filed an Amendment and Response in which the Specification and the Abstract were amended. No claims were amended. On November 10, 2004, the Examiner issued a second Office Action, finally rejecting Claims 1-21. On January 7, 2005, the Appellant filed a Request for Reconsideration requesting allowance of the instant application. On February 9, 2005, the Examiner issued an advisory action stating that the Request for Reconsideration had been considered, but did not place this application in condition for allowance. On April 18, 2005, the Appellant filed a timely Notice of Appeal.

This Appeal requests the Board to reverse the rejection of Claims 1-21. The reasons for requesting the reversal are set forth below. The claims on appeal are set forth in Appendix VIII.

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IV. STATUS OF AMENDMENTS

There are no outstanding amendments to this application subsequent to final rejection.

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V. SUMMARY OF CLAIMED SUBJECT MATTER

The present invention is directed towards methods and apparatus for encoding session data utilized by a server computer, and storing such data as session cookies on a client computer in an Internet and World Wide Web ("WWW") network computing environment, while minimizing the amount of data transferred between the client and server computers and maximizing the amount of information transferred. It is to be understood that the following summary of the various exemplary embodiments does not define the scope and/or interpretation of any of the claims of this application. Instead, the summary is provided to help the Board better recognize claim distinctions discussed hereinafter.

A. Summary of Exemplary Subject Matter

As noted above, the present invention is directed towards methods and apparatus for encoding and storing storage data that minimizes the amount of data transferred between a client computer and a server computer, while at the same time maximizing the amount of configuration information transferred. An exemplary embodiment of the present invention uses encoding and storing session data in an encoded and encrypted session cookie in order to maximize the amount of configuration information transferred. In particular, an exemplary embodiment of the present invention provides a server computer that encodes session data into a session cookie in a tag-length-value format to create encoded configuration data. A tag-length-value format encodes data by providing a tag identifying the semantic information that a value represents, the length of the value, and then the value itself.

Once the data has been encoded in the tag-length-value format, the server computer encrypts the encoded session data using a modified encryption key to create encrypted encoded configuration data. The modified encryption key may be formatted, i.e., created, for example, by inserting a secret, such as the user's password or e-mail address, into a standard encryption key at

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a predefined location. The session cookie is then formed by concatenating the secret, the length of the secret, and the length of the length of the secret, with the encrypted encoded configuration data. The session cookie is then transmitted from the server computer to a client computer, where it is stored.

Figure 6 of the instant application is an exemplary illustration of the foregoing exemplary embodiment.

The construction of cookies as described above confers several advantages, including compatibility, flexibility, and security. The tag-length-value format provides forward and backward compatibility with existing and future Web server application software. Specifically, the server computer may ignore tags that it does not recognize and instead use session cookies generated by previous or future versions of the server operating system software. Moreover, the server has the flexibility to use tags specific to the services it provides for users, such as tags that indicate which language to use for a session. Furthermore, the use of a modified encryption key substantially reduces the likelihood of unauthorized access and modification of the cookie, thus enhancing security.

Another exemplary embodiment of the invention is a data structure stored on a computer readable medium, the data structure including first and second data fields. The first data field contains data representing a data length identifier and a tag type. The second data field contains configuration data of the tag type and has a length described by said data length identifier.

Figures 4 and 5 of the instant application illustrate a data structure according to an exemplary embodiment of the present invention. As is illustrated, an encoded configuration data 310 includes at least a tag type 400 and a data length 406. These figures further illustrate that the tag 400 is defined by a separate data length identifier 402 and a data type identifier 404. The data length identifier may include an extended tag type value 405, if desired.

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The specific data structure illustrated in Figures 4 and 5 is very advantageous, inasmuch as tags associated with other configuration data may be accounted for by way of the data length identifier 402 and, in particular, the extended tag type value 405. A more detailed discussion of the foregoing may be found on pages 15 and 16 of the specification of the instant application.

B. Support for Claimed Subject Matter in the Specification

1. Claims 1-15

Independent Claim 1 is directed at a method for storing session data on a client computer, comprising encoding the session data in a tag-length-value format to create encoded configuration data (Specification, page 16, lines 3-6; Figure 6, block 602). The method further comprises encrypting said encoded configuration data using a modified encryption key to create encrypted encoded configuration data (Specification, page 6, lines 7-9; Figure 6, block 604). The method further comprises concatenating a secret, a length of the secret, and a length of the length of the secret with said encrypted encoded configuration data to form a session cookie (Specification, page 16, lines 10-14; Figure 6, block 606). The method further comprises transmitting said session cookie to said client computer (Specification, page 16, lines 14-15; Figure 6, block 608).

Claim 10 depends from Claim 1 via intermediate Claims 2-9 and is directed at generating a new session cookie in response to determining that the tag comprises a valid tag (Specification, page 6, lines 1-6).

2. Claims 16-21

Independent Claim 16 is directed at a computer-readable medium having stored thereon a data structure comprising a first data field and a second data field. The first data field contains a data length identifier and a tag (Specification page 14, line 24; Figures 4 and 5, references 400 and 406). The second data field contains configuration data of the tag type and having a length

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described by the data length identifier (Specification, page 14, lines 29-30; Figures 4 and 5, references 402 and 404).

Claim 17 depends from Claim 16 and recites that said data structure further comprises a plurality of additional data structures comprising one of said first data field and one of said second data field for a plurality of tags (Specification, page 14, lines 29-31; Figures 4 and 5, references 402 and 404).

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VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

The final Office Action dated November 10, 2004 ("Office Action"), rejected all the pending claims of the instant application on the following grounds.

Ground 1: Independent Claim 16 and dependent Claim 17 were rejected under 35 U.S.C. § 102(b) as being anticipated by Spies et al., U.S. Patent No. 5,689,565 ("Spies").

Ground 2: Independent Claim 1 and dependent Claims 2-7 and 12-15 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Shrader et al., U.S. Patent No. 6,374,359 ("Shrader"), in view of Quimby, U.S. Patent No. 5,367,573 ("Quimby"), and further in view of Hardy et al., U.S. Patent No. 5,623,546 ("Hardy").

Ground 3: Claims 8-11 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Shrader, as modified by Quimby and Hardy, and further in view of Becker et al., U.S. Patent No. 6,557,038 ("Becker").

Applicant requests a review of all of the foregoing grounds in this appeal.

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VII. ARGUMENT

Applicant presents the following arguments on the merits of the application and claims therein with regard to each ground of rejection.

A. Summary of References

The following summaries of references cited in the Office Action mainly focus on those aspects disclosed by the references that were referred to in rejecting the claims, and does not include other aspects of the references that are of little or no relevance to the present grounds of rejection.

Spies

Spies is generally directed at a cryptography system providing functionality to applications requiring encryption. Cryptography is used to securely transfer information over a communication system that is presumed to be insecure. Figure 9 illustrates a data structure used to carry information between parties in a communication session. The data structure comprises a tag-length-value format that uses three data fields each of which carry a single type of data, namely, an identifier or tag field, a length field, and a value field, in contrast to the present invention where, as illustrated in Figure 4, the tag field 400 in the data structure carries two distinct data types, namely, a data length identifier and a data type identifier, providing for extended tag types.

In summary, while Spies purportedly teaches a data structure having a tag-length-value format, as discussed more fully below, Spies does not teach the data structure recited by the claims to which Spies has been applied (Claims 16 and 17) and, thus, does not anticipate those claims.

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Shrader

Shrader is generally directed at client-server Web-based transaction processing and in particular to authenticating users to access applications running on a Web server. Shrader purportedly discloses the dynamic use and validation of Hyper Text Transfer Protocol ("HTTP") cookies for authentication by an application running on a Web server. More specifically, Shrader purportedly discloses a method for constructing a cookie value using an encryption and encoding scheme. The cookie is a character string (such as ASCII characters) that is generated by the Web server and sent to the client Web browser upon user login to an application running on the Web server. The cookie is generated by concatenating at least a user name and password and client machine IP (Internet Protocol) address together and encrypting the result into a binary string. The cookie is subsequently sent back to the Web server which determines whether the cookie is valid by decrypting the cookie and verifying that the IP address belongs to the client machine and that the user name and password are valid. If the cookie is valid, then the user is granted access to the application running on the Web server. In contrast, the present invention generates a cookie by concatenating a secret, the length of the length of the secret, the length of the secret, and the encrypted encoded session data, as illustrated in Figure 3A.

In summary, Shrader does not disclose the method of cookie generation that is recited in the claims in the present application to which Shrader has been applied (Claims 1-15).

Quimby

Quimby is generally directed at a machine-readable data structure encoding security information for use in authenticating electronic documents. Quimby purportedly discloses a Signature Unique Identifier ("SID") used in a Signature Data Object ("SDO"), which may be generated using date, time, session identification, etc. The SDO is the machine-readable data structure that is associated with an electronic document. The SDO is an application-level

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construct that can be implemented in addition to other security measures in a computer system. SDO is formatted as a tag-length-value record comprising an arbitrary number of fields of arbitrary length, each field further comprising a tag to identify the field, a length indicator to indicate a field length, and the value of the field. An electronic business document may be routed, tracked, and authenticated in a wide-area network environment using SDOs. In contrast to the present invention, SDO is not used in constructing session cookies in a Web environment. Additionally, the SDO's tag-length-value format does not indicate concatenating a secret, a length of the secret, and a length of the length of the secret as recited by the claims in the present invention.

In summary, while Quimby discloses the use of tag-length-value format in encoding data records, Quimby fails to disclose the features recited in the claims of the present application to which Quimby has been applied (Claims 1-15).

Hardy

Hardy is generally directed at security and portable key encrypted data. Hardy purportedly discloses a system and method for allowing portable encrypted data to be accessed through multiple hosts, including new hosts, without requiring a secure link to the new hosts. Hardy further discloses the use of a split-key encryption system that stores encrypted data and one split of the encryption key on a portable device. A password-modified key is made and stored on the portable device by combining a password with the encryption key. When the portable device is connected to a new host, the data on the host can be accessed using the password-modified key. When the user attempts to access the data on the new host, the portable device asks for the password, and if a valid password is entered, then access to data is granted to the user. In contrast, the claims of the present application recite concatenating a secret, a length of the secret, and a length of the length of the secret to construct a cookie.

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In summary, while Hardy purportedly discloses password-modified encryption keys, Hardy fails to disclose claimed features not disclosed in Shrader and/or Quimby.

Becker

Becker is generally directed at a method for maintaining session states in data processing systems using a stateless protocol. Becker purportedly discloses a session as a logical connection between two networked computer systems that can be activated and configured as requested. A session state is a collection of data items used by a web application whose lifetime extends beyond a single HTTP transaction. A client browser in this network environment periodically performs a "keep-alive" operation on the session to prevent the session from timing out and ending during use. Becker discloses a software process that periodically receives an indication from a client for a particular session state. As a result, the process resets a timer associated with the session state, resetting the time period for the session state. While Becker discloses resetting a session timer, Becker does not disclose the transmission of a new session cookie. In contrast, the claims of the present application to which Becker has been applied recite the construction and transmission of a new cookie in response to a valid tag obtained from the current session cookie.

In summary, while Becker discloses resetting a session timer, Becker fails to disclose the claimed features missing from Shrader, Quimby, and Hardy.

B. Ground 1: Claims 16-17 Rejected Under 35 U.S.C. § 102(b)

Claims 16 and 17 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Spies. For the reasons discussed below, Applicant respectfully submits that Spies fails to teach or suggest the recitations of independent Claim 16. Moreover, Spies is similarly deficient with respect to the rejected dependent Claim 17. Additionally, Claim 17 is allowable at least due to its dependence upon allowable independent Claim 16.

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1. Rejection of Independent Claim 16

Independent Claim 16 sets forth a combination of limitations including "a first data field containing data representing a data length identifier and a tag type" (emphasis added). Thus, Claim 16 recites a "first data field" that includes both "a data length identifier" and "a tag type" (emphasis added). Spies fails to teach or suggest at least this limitation of independent Claim 16.

Spies purportedly discloses a cryptography system and method for providing cryptographic services for a computer application. According to Spies, and as illustrated in Figure 9 of the patent, a communication data structure may include a data structure 140 used to carry a package that is exchanged between participants or between a participant and a trusted authority. Spies, Col. 15, lines 62-65. The tag-length-value (TLV) data structure 140 consists of three parts: an identifier field 142 (which is also known as the "tag"), a length field 144, and a value field 146. Spies, Col. 16, lines 4-6. The identifier field or tag 142 of Spies is a fixed-sized field that identifies the commerce data contained in the package. The length field 144 is a variable-sized field that contains the length of the commerce data, in bytes, contained in the package. The three specific fields 142, 144, and 146 are those that are included in the data structure 140. The data structure 140 does not include a field that contains data representing both "a data length identifier and a tag type." The identifier field 142 of the data structure 140 identifies the commerce data contained in the package, i.e., it is a tag data field. The identifier field does not contain a data length identifier. Spies does not disclose or suggest data structure fields capable of containing data that identifies two distinct data types. In contrast, Claim 16 recites that the first data field set forth in independent Claim 16 includes "data representing the data length identifier and a tag type" (emphasis added). Furthermore, Claim 16 recites a two-tier data structure, i.e., a data structure having two types of data within a single data structure field.

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In contrast, Spies teaches a single-tier data structure, i.e., a data structure having one type of data within each field of the data structure.

The "Response to Arguments" section of the final Office Action states that the applicant's arguments with respect to Claims 16 and 17 are unpersuasive. In particular, the final Office Action states that "[t]he claim never states the data structure is required to carry two distinct data types." Furthermore, the Office Action states that one TLV data structure can contain one type of data, while another TLV data structure can contain a different type of data." It is unclear from the foregoing statements how multiple TLV data structures teach or even remotely suggest a two-tier data structure, much less the two-tier data structure recited in independent Claim 16 and discussed above. The data structure 140 of Figure 9 of Spies includes an identifier field (tag) 142, a length field 144, and a value field 146. Spies describes what is contained in the identifier field (tag) 142. According to Spies, the identifier field 142 is a fixed-size (e.g., 32 bit) field that defines or identifies the data contained in the package. Nothing further is discussed in relation to the identifier field (tag) 142. In contrast, Claim 16 recites: "a first data field containing data representing a data length identifier and a tag type" (emphasis added). As discussed above, clearly the "first data field" includes data that has two parts: "a data length identifier and a tag type" (emphasis added). Nothing in Spies teaches or suggests that the identifier field (tag) 142 is capable of including two parts, much less the two parts recited in independent Claim 16. As a result, applicant submits that Spies fails to anticipate Claim 16, and thus Claim 16 is allowable, and requests that this Board reverse this grounds of rejection of the final Office Action.

2. Rejection of Dependent Claim 17

Claim 17 is submitted to be allowable due to its dependence upon an allowable independent claim (Claim 16) and for additional reasons discussed below. Claim 17 is

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dependent on Claim 16 and recites: "said data structure further comprises a plurality of additional data structures comprising one of said first data field and one of said second data field for a plurality of tags" (emphasis added). Spies does not teach or suggest a data structure further comprising a plurality of additional data structures for a plurality of tags. Spies illustrates in Figure 9 "a data structure 140 used to carry each package It is used to encapsulate the messages and the message components." Spies, Col. 15, lines 63-67. Spies does not teach or suggest the use of a plurality of additional data structures constituting extended tags, and each further comprising one of said first data field and one of said second data field. Therefore, Claim 17 is submitted to be allowable.

In view of the above comments, applicant respectfully requests that this Board reverse final Office Action rejection of Claim 17 under 35 U.S.C. § 102(b).

C. Ground 2: Claims 1, 2-7 and 12-15 Rejected Under 35 U.S.C. § 103(a)

Claims 1-7 and 12-15 stand rejected under 35 U.S.C. § 103(a) as being unpatentable in view of the teachings of Shrader, U.S. Patent No. 6,374,359, taken in view of the teachings of Quimby, U.S. Patent No. 5,367,573, and further taken in view of the teachings of Hardy, U.S. Patent No. 5,623,546. For the reasons discussed below, applicant submits that the cited references, taken alone or in any motivated combination, fail to teach or suggest the features recited in independent Claim 1. The cited references are similarly deficient with respect to the claims dependent from Claim 1 included in this group of claims. Thus, the dependent claims are allowable due to their dependence upon an allowable independent claim and for additional reasons.

1. Rejection of Independent Claim 1

Among other recitations, independent Claim 1 recites "concatenating a secret, a length of the secret, and a length of the length of the secret with said encrypted encoded configuration data

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to form a session cookie." The cited references, singly or in any motivated combination, fail to teach or suggest this recitation of Claim 1. Shrader discloses the dynamic use and validation of HTTP cookies for authentication. Shrader further discloses that a cookie value routine 42 is initiated when a server-driven graphical user interface verifies a username and a password sent to a server from a login panel of a user's web browser. The cookie value routine 42 constructs a cookie value that includes a username, password, and IP address. Shrader, Col. 7, lines 16-21. Shrader does not teach or suggest concatenating a secret, a length of the secret, and a length of the length of the secret. Shrader discloses that the username and password may be included in the construction of the cookie, but Shrader does not teach or suggest using a length of the secret and a length of the length of the secret in any form in the construction of the cookie, let alone teach specifically that these quantities be concatenated to form the cookie.

Quimby also does not teach or suggest concatenating a secret, a length of the secret, and a length of the length of the secret. Quimby discloses that character-string data may be encoded in a tag-length-value format with an arbitrary number of fields, each field comprising a tag, a length, and a value. Therefore, Quimby fails to supply the teachings missing from Shrader. Nor does Hardy make up for the deficiencies of Shrader and Quimby. Hardy does not teach or suggest concatenating a secret, a length of a secret, and a length of the length of the secret.

The modified rejection of Claims 1-7 and 12-15 under 35 U.S.C. § 103(a) states that Shrader teaches "[c]oncatenating a secret, a length of the secret, and the length of the length of the secret with said encrypted encoded configuration data to form a session cookie. Office Action, page 3, paragraph 3; Shrader, Col. 7, lines 16-21. In the Response to the Arguments section of the Office Action (page 12, end of second paragraph), the Examiner states that "[t]he length field would then also be dynamic in size, so a length of the length field, which is static, could describe the length field, which then describes the cookie data" (emphasis added). The fact

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that a reference could perform a particular function is not a teaching that the reference does perform the function. The fact that a function could be performed is mere speculation, it is not a teaching. In summary, Shrader, singly or in any motivated combination with other cited references, i.e., Quimby and Hardy, does not teach or suggest concatenating a secret, a length of secret, and a length of length of secret in constructing a cookie.

A proper rejection under 35 U.S.C. § 103(a) requires that each and every element recited in the claim being rejected must be taught by the relied on combination of references. Additionally, the rejection must indicate a reasonable motivation for combining the references, or the references must disclose such a motivation. That is, the motivation must either come from the references themselves, or must be reasonably based on the expertise of those having ordinary skill in the art. Applicant respectfully submits that the above-indicated conclusory statements set forth in the final Office Action do not satisfy the foregoing standards required for a rejection under 35 U.S.C. § 103(a). More specifically, as noted above, the revised rejection under 35 U.S.C. § 103(a) states that the teachings of Schrader et al. "could" teach a certain limitation set forth in rejected independent Claim 1. (See page 12, last sentence of second paragraph of current Office Action.) Applicant submits that this line of reasoning: (i) requires designing a new data structure not taught or suggested by any of the cited references, singly or in any motivated combination; (ii) is only supported by hindsight knowledge; (iii) is conclusory; and, thus, (iv) is insufficient to support a proper rejection under 35 U.S.C. § 103(a). An invention is not obvious just because a reference "could" have performed a particular function or prior art "could" have been combined. In the case of *In re Fritch*, the Federal Circuit stated that this type of conclusory statement is merely "hindsight reconstruction" that is insufficient and improper reasoning for supporting an obviousness rejection.

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In summary, since Shrader, Quimby, and Hardy, both singly and in any motivated combination, fail to teach or suggest at least "concatenating a secret, a length of the secret, and a length of the length of the secret with said encrypted coded configuration data to form a session cookie," the requirements for rejection of Claim 1 under 35 U.S.C. § 103(a), as discussed above, have not been satisfied. As a result, applicant respectfully requests that this Board reverse the final Office Action rejection of independent Claim 1, and the rejection of Claims 2-7 and 12-15 dependent thereon.

D. Ground 3: Claims 8-11 Rejected Under 35 U.S.C. § 103(a)

Claims 8-11 depend from Claim 1 and are thus allowable at least because of the allowability of Claim 1.

Dependent Claim 10 recites: "in response to determining that said tag comprises a valid tag, (i) generating a new session cookie" (Emphasis added.) The final Office Action states that "the combination of Shrader et al. as modified by Quimby and Hardy et al. and further in view of Becker et al. teaches" the above mentioned feature. Office Action, page 9, paragraph 2. The final Office Action directs attention to Figure 4, reference number 80 of Shrader as teaching this feature. Applicant disagrees. Shrader, in combination with other cited references, fails to teach or suggest the foregoing feature recited in Claim 10. Figure 4 of Shrader illustrates a flowchart for constructing a cookie value. Shrader discloses that when the LDAP GUI CGI verifies the user name and password sent to it from the login panel of the user's web browser, the routine begins at step 80 by constructing a cookie value. Shrader, Col. 7, lines 16-18. Therefore, at best, Shrader in view of Becker discloses the construction of a single LDAP cookie once only after user login, the same cookie being periodically validated. Shrader, Col. 5, lines 59-62; Becker, Col. 6, lines 3-13. In contrast, Claim 10 recites the construction of a new session cookie in response to a valid tag obtained from the (current) session cookie. Shrader, singly or in any

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motivated combination with the other cited references, Quimby, Hardy, and Becker, simply does not teach or suggest the foregoing feature recited in Claim 10. Therefore, Claim 10 is submitted to be allowable for reasons in addition to the reasons why the claims for which Claim 10 depends are allowable.

In view of the above comments, applicant respectfully requests that this Board reverse the final rejection of Claims 8-11.

Conclusion

In summary, applicant respectfully submits that the grounds of rejection set forth in the final Office Action are in error and requests this Board to reverse the final Office Action and allow all of the rejected claims.

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VIII. CLAIMS APPENDIX

1. A method for storing session data on a client computer, comprising:

encoding said session data in a tag-length-value format to create encoded configuration data;

encrypting said encoded configuration data using a modified encryption key to create encrypted encoded configuration data;

concatenating a secret, a length of the secret, and a length of the length of the secret with said encrypted encoded configuration data to form a session cookie; and

transmitting said session cookie to said client computer.

2. The method of Claim 1, wherein said modified encryption key comprises a standard encryption key with said secret inserted at a predefined location.

3. The method of Claim 2, wherein said modified encryption key further comprises a time stamp indicating a time at which said modified encryption key is created.

4. The method of Claim 3, further comprising:

requesting said session cookie from said client computer;

receiving said session cookie from said client computer;

extracting said secret from said session cookie;

creating said modified encryption key by inserting said secret extracted from said session cookie into said standard encryption key at said predefined location; and

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decrypting said session data from said cookie using said modified encryption key.

5. The method of Claim 4, further comprising:
decoding a tag from said session data;
determining whether said tag comprises a valid tag; and
in response to determining that said tag comprises a valid tag,
configuring said server using data contained in said tag.

6. The method of Claim 5, further comprising:
in response to determining that said tag does not comprise a valid tag, determining whether additional tags remain to be decoded from said encoded configuration data; and
in response to determining that additional tags remain to be decoded, decoding a next tag and determining whether said next tag comprises a valid tag.

7. The method of Claim 6, further comprising:
in response to determining that said next tag comprises a valid tag,
configuring said server using data contained in said next tag.

8. The method of Claim 7, further comprising:
in response to determining that additional tags do not remain to be decoded, periodically authenticating said session cookie.

9. The method of Claim 8, wherein periodically authenticating said session cookie comprises:
starting a session timer;
determining whether said session timer has elapsed; and

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in response to determining that said session timer has elapsed,

- (i) requesting said session cookie from said client computer,
 - (ii) decrypting and decoding a tag contained in said session cookie, and
 - (iii) determining whether said tag comprises a valid tag.
10. The method of Claim 9, further comprising:
- in response to determining that said tag comprises a valid tag,
- (i) generating a new session cookie,
 - (ii) transmitting said new session cookie to said client computer, and
 - (iii) resetting said session timer.

11. The method of Claim 9, further comprising:

in response to determining that said tag does not comprises a valid tag, ending a communications session between said server computer and said client computer.

12. A computer-readable medium containing computer-readable instructions which, when executed by a computer, perform the method of Claim 1.

13. A computer-readable medium containing computer-readable instructions which, when executed by a computer, perform the method of Claim 2.

14. A computer-controlled apparatus for performing the method of Claim 1.

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15. A computer-controlled apparatus for performing the method of Claim 2.

16. A computer-readable medium having stored thereon a data structure, comprising:

a first data field containing data representing a data length identifier and a tag type; and

a second data field containing configuration data of said tag type and having a length described by said data length identifier.

17. The computer-readable medium of Claim 16, wherein said data structure further comprises a plurality of additional data structures comprising one of said first data field and one of said second data field for a plurality of tags.

18. The computer-readable medium of Claim 17, wherein said data length identifier comprises the first two bits of said first data field.

19. The computer-readable medium of Claim 17, wherein said data length identifier comprises data indicating that the length of said second data field is one byte.

20. The computer-readable medium of Claim 17, wherein said data length identifier comprises data indicating that the length of said second data field is four bytes.

21. The computer-readable medium of Claim 17, wherein said data length identifier comprises data indicating that said tag type comprises an extended tag type.

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IX. EVIDENCE APPENDIX

None

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X. RELATED PROCEEDINGS APPENDIX

None

Respectfully submitted,

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I hereby certify that this correspondence is being deposited in triplicate with the U.S. Postal Service in a sealed envelope as first class mail with postage thereon fully prepaid and addressed to Mail Stop Appeal Brief - Patents, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on the below date.

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